

# **STANDARDS OF QUALITY FOR WATERS OF THE STATE**

**R317-2, UTAH ADMINISTRATIVE CODE**



**UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER QUALITY**

**EFFECTIVE DATE OF LAST REVISION - MARCH 17, 2000**

to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Board after public hearing, as High Quality Waters - Category 1. New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation. Protection of such segments from pathogens in diffuse, underground sources is covered in R317-5 and R317-7 and the Regulations for Individual Wastewater Disposal Systems (R317-501 through R317-515). Other diffuse sources (nonpoint sources) of wastes shall be controlled to the extent feasible through implementation of best management practices or regulatory programs.

Projects such as, but not limited to, construction of dams or roads will be considered where pollution will result only during the actual construction activity, and where best management practices will be employed to minimize pollution effects.

Waters of the state designated as High Quality Waters - Category 1 are listed in R317-2-12.1.

### 3.3 High Quality Waters - Category 2

High Quality Waters - Category 2 are designated surface water segments which are treated as High Quality Waters - Category 1 except that a point source discharge may be permitted provided that the discharge does not degrade existing water quality. Waters of the state designated as High Quality Waters - Category 2 are listed in R317-2-12.2.

### 3.4 High Quality Waters - Category 3

High Quality Waters-Category 3 are designated surface water segments where a point source discharge may be permitted under the conditions and following the review outlined in this section. The High Quality Waters Category 3 designation may be applied to waters with quality higher than that necessary to support the designated beneficial uses of those waters.

Drinking water sources or waters with special value for recreation or fisheries are candidates to be designated as High Quality Waters - Category 3. Before new point source discharges, or increases to existing point source discharges, may be allowed, the State shall assure that (1) there shall be achieved all statutory and regulatory requirements for all new and existing point sources and there shall be achieved all required cost-effective and reasonable best management practices for nonpoint source control in the immediate area of the discharge, (2) there are no reasonable non-degrading or less degrading alternatives to the discharge (based on information provided by the discharger), (3) the proposed activity has economic and social importance, and (4) water quality standards will not be violated by the discharge.

In addition, depending upon the location of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or instream water quality standards, may be required in order to adequately protect public health and the environment. Such additional treatment may include additional disinfection, suspended solids removal to make the disinfection

5.1 Individual Mixing Zones. Individual mixing zones may be further limited or disallowed in consideration of the following factors in the area affected by the discharge:

- a. Bioaccumulation in fish tissues or wildlife,
- b. Biologically important areas such as fish spawning/nursery areas or segments with occurrences of federally listed threatened or endangered species,
- c. Potential human exposure to pollutants resulting from drinking water or recreational activities,
- d. Attraction of aquatic life to the effluent plume, where toxicity to the aquatic life is occurring.
- e. Toxicity of the substance discharged,
- f. Zone of passage for migrating fish or other species (including access to tributaries), or
- g. Accumulative effects of multiple discharges and mixing zones.

#### **R317-2-6. Use Designations.**

The Board as required by Section 19-5-110, shall group the waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each class as set forth below. Surface waters of the state are hereby classified as shown in R317-2-13.

6.1 Class 1 -- Protected for use as a raw water source for domestic water systems.

- a. Class 1A -- Reserved.
- b. Class 1B -- Reserved.
- c. Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

6.2 Class 2 -- Protected for recreational use and aesthetics.

a. Class 2A -- Protected for primary contact recreation such as swimming.

b. Class 2B -- Protected for secondary contact recreation such as boating, wading, or similar uses.

6.3 Class 3 -- Protected for use by aquatic wildlife.

a. Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

b. Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

c. Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

d. Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

e. Class 3E -- Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.

6.4 Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- The Great Salt Lake. Protected for primary and

of water quality standards, designations and classifications, and public meetings may be held for consideration of discharge requirements set to protect water uses under assigned classifications.

**R317-2-12. High Quality Waters.**

12.1 High Quality Waters - Category 1.

In addition to assigned use classes, the following surface waters of the State are hereby designated as High Quality Waters - Category 1:

12.1.1 All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands with the following exceptions:

All High Quality Waters - Category 2 as listed in R317-2-12.2.

Weber River, a tributary to the Great Salt Lake, in the Weber River Drainage from Uintah to Mountain Green.

12.1.2 Other surface waters, which may include segments within U.S. National Forests as follows:

12.1.2.1 Colorado River Drainage

Calf Creek and tributaries, from confluence with Escalante River to headwaters.

Sand Creek and tributaries, from confluence with Escalante River to headwaters.

Mamie Creek and tributaries, from confluence with Escalante River to headwaters.

Deer Creek and tributaries, from confluence with Boulder Creek to headwaters (Garfield County).

Indian Creek and tributaries, through Newspaper Rock State Park to headwaters.

12.1.2.2 Green River Drainage

Fish Creek from confluence with White River to Scofield Dam.

Range Creek and tributaries, from confluence with Green River to headwaters.

Strawberry River and tributaries, from confluence with Red Creek to headwaters.

Avintaquin Creek, from confluence with Strawberry River to confluence with Cottonwood Creek.

Ashley Creek and tributaries, from Steinaker diversion to headwaters.

Jones Hole Creek and tributaries, from confluence with Green River to headwaters.

Green River, from state line to Flaming Gorge Dam.

Tollivers Creek, from confluence with Green River to headwaters.

Allen Creek, from confluence with Green River to headwaters.

12.1.2.3 Virgin River Drainage

North Fork Virgin River and tributaries, from confluence with East Fork Virgin River to headwaters.

East Fork Virgin River and tributaries from confluence with North Fork Virgin River to headwaters.

12.1.2.4 Kanab Creek Drainage

Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters.

12.1.2.5 Bear River Drainage

12.1.2.10 Raft River Drainage  
Clear Creek and tributaries, from state line to headwaters (Box Elder County).

Birch Creek (Box Elder County), from state line to headwaters.  
Cotton Thomas Creek from confluence with South Junction Creek to headwaters.

12.1.2.11 Western Great Salt Lake Drainage  
All streams on the south slope of the Raft River Mountains above 7000' mean sea level.

Donner Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Bettridge Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Clover Creek, from diversion to headwaters.

All surface waters on public land on the Deep Creek Mountains.

12.1.2.12 Farmington Bay Drainage  
Holmes Creek and tributaries, from Highway US-89 to headwaters (Davis County).

Shepard Creek and tributaries, from Height Bench diversion to headwaters (Davis County).

Farmington Creek and tributaries, from Height Bench Canal diversion to headwaters (Davis County).

Steed Creek and tributaries, from Highway US-89 to headwaters (Davis County).

12.2 High Quality Waters - Category 2.

In addition to assigned use classes, the following surface waters of the State are hereby designated as High Quality Waters - Category 2:

12.2.1 Green River Drainage

Deer Creek, a tributary of Huntington Creek, from the forest boundary to 4800 feet upstream

12.3 High Quality Waters - Category 3.

In addition to assigned use classes, the following surface waters of the State are hereby designated as High Quality Waters - Category 3:

12.3.1 Provo River Drainage

Provo River and tributaries from Murdock Diversion to U.S. Forest Boundary, including Deer Creek Reservoir and Jordanelle Reservoir.

### **R317-2-13. Classification of Waters of the State.**

13.1 Upper Colorado River Basin

a. Colorado River Drainage

TABLE

Paria River and tributaries, from state line to headwaters	2B	3C	4
All tributaries to Lake Powell, except as listed separately	2B	3B	4
Escalante River and			

San Juan River and tributaries, from Lake Powell to state line except as listed below:	1C	2B	3B	4
Johnson Creek and tributaries, from confluence with Recapture Creek to headwaters	1C	2B 3A		4
Verdure Creek and tributaries, from Highway US-191 crossing to headwaters		2B 3A		4
North Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A		4
South Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A		4
Spring Creek and tributaries, from confluence with Vega Creek to headwaters		2B 3A		4
Montezuma Creek and tributaries, from U.S. Highway 191 to headwaters	1C	2B 3A		4
Colorado River and tributaries, from Lake Powell to state line except as listed separately	1C	2B	3B	4
Indian Creek and tributaries, from confluence with Colorado River to Newspaper Rock State Park		2B	3B	4
Indian Creek and tributaries, through Newspaper Rock State Park to headwaters	1C	2B 3A		4
Kane Canyon Creek and tributaries, from confluence with Colorado River to headwaters		2B	3C	4
Mill Creek and tributaries, from confluence with Colorado River to headwaters	1C	2B 3A		4
Dolores River and tributaries, from confluence with Colorado River to state line		2B	3C	4
Roc Creek and tributaries, from				

tributaries, from confluence with Huntington Creek to Highway U-57 crossing		2B	3C	4
Cottonwood Creek and tributaries, from Highway U-57 crossing to headwaters	1C	2B 3A		4
Cottonwood Canal, Emery County	1C	2B		4
Price River and tributaries, from confluence with Green River to Carbon Canal Diversion at Price City Golf Course		2B	3C	4
Price River and tributaries, from Carbon Canal Diversion at Price City Golf Course to Price City Water Treatment Plant intake.		2B 3A		4
Price River and tributaries, from Price City Water Treatment Plant intake to headwaters	1C	2B 3A		4
Grassy Trail Creek and tributaries, from Grassy Trail Creek Reservoir to headwaters	1C	2B 3A		4
Range Creek and tributaries, from confluence with Green River to Range Creek Ranch		2B 3A		4
Range Creek and tributaries, from Range Creek Ranch to headwaters	1C	2B 3A		4
Rock Creek and tributaries, from confluence with Green River to headwaters		2B 3A		4
Nine Mile Creek and tributaries, from confluence with Green River to headwaters		2B 3A		4
Pariette Draw and tributaries, from confluence with Green River to headwaters		2B	3B 3D	4
Willow Creek and tributaries (Uintah County), from confluence with Green River to headwaters		2B 3A		4

headwaters	1C	2B 3A	4
Big Brush Creek and tributaries, from confluence with Green River to Tyzack (Red Fleet) Dam		2B 3B	4
Big Brush Creek and tributaries, from Tyzack (Red Fleet) Dam to headwaters	1C	2B 3A	4
Jones Hole Creek and tributaries, from confluence with Green River to headwaters		2B 3A	
Diamond Gulch Creek and tributaries, from confluence with Green River to headwaters		2B 3A	4
Pot Creek and tributaries, from Crouse Reservoir to headwaters		2B 3A	4
Green River and tributaries, from Utah-Colorado state line to Flaming Gorge Dam except as listed below:		2B 3A	4
Sears Creek and tributaries, Daggett County		2B 3A	
Tolivers Creek and tributaries, Daggett County		2B 3A	
Red Creek and tributaries, from confluence with Green River to state line		2B 3C	4
Jackson Creek and tributaries, Daggett County		2B 3A	
Davenport Creek and tributaries, Daggett County		2B 3A	
Goslin Creek and tributaries, Daggett County		2B 3A	
Gorge Creek and tributaries, Daggett County		2B 3A	
Beaver Creek and tributaries, Daggett County		2B 3A	



(except as listed below), from  
the Quail Creek diversion to  
headwaters

1C      2B      3C      4

North Fork Virgin River and  
tributaries

1C      2B 3A      4

East Fork Virgin River, from  
town of Glendale to headwaters

2B 3A      4

Kolob Creek, from confluence  
with Virgin River to  
headwaters

2B 3A      4

Beaver Dam Wash and tributaries,  
from Motoqua to headwaters

2B 3A      4

b. Kanab Creek Drainage

TABLE

Kanab Creek and tributaries,  
from state line to irrigation  
diversion at confluence with  
Reservoir Canyon

2B      3C      4

Kanab Creek and tributaries,  
from irrigation diversion at  
confluence with Reservoir Canyon  
to headwaters

2B 3A      4

Johnson Wash and tributaries,  
from state line to confluence  
with Red Wash

2B      3C      4

Johnson Wash and tributaries,  
from confluence with Red Wash  
to headwaters

2B 3A      4

13.3 Bear River Basin

a. Bear River Drainage

TABLE

Bear River and tributaries, from  
Great Salt Lake to Utah-Idaho  
border, except as listed below:

2B      3B      3D 4

Willard Creek, from Willard Bay  
Reservoir to headwaters

2B 3A      4

Perry Canyon Creek from U.S.  
Forest boundary to headwaters

2B 3A      4

Box Elder Creek from confluence

Swan Creek and tributaries, from Bear Lake to headwaters	2B 3A	4
Big Creek and tributaries, from Bear Lake to headwaters	2B 3A	4
Bear River and tributaries in Rich County	2B 3A	4
Bear River and tributaries, from Utah-Wyoming state line to headwaters (Summit County)	2B 3A	4
Mill Creek and tributaries, from state line to headwaters (Summit County)	2B 3A	4

13.4 Weber River Basin  
a. Weber River Drainage

TABLE

Weber River, from Great Salt Lake to Slaterville diversion, except as listed below:	2B	3C 3D	4
Four Mile Creek from I-15 to headwaters	2B 3A		4
Weber River and tributaries, from Slaterville diversion to Stoddard diversion	2B 3A		4
Weber River and tributaries, from Stoddard diversion to headwaters	1C 2B 3A		4
Strong's Canyon Creek and tributaries, from U.S. National Forest boundary to headwaters	1C 2B 3A		4
Burch Creek and tributaries, from Harrison Boulevard in Ogden to headwaters	1C 2B 3A		
Spring Creek and tributaries, from U.S. National Forest boundary to headwaters	1C 2B 3A		4
Ogden River and tributaries, from confluence with Weber River to Pineview Dam	2B 3A		4
Wheeler Creek from confluence			

from confluence with Jordan River to Interstate Highway 15		2B	3C	4
Mill Creek (Salt Lake County) and tributaries from Interstate Highway 15 to headwaters		2B 3A		4
Big Cottonwood Creek and tributaries, from confluence with Jordan River to Big Cottonwood Water Treatment Plant		2B 3A		4
Big Cottonwood Creek and tributaries, from Big Cottonwood Water Treatment Plant to headwaters	1C	2B 3A		
Deaf Smith Canyon Creek and tributaries	1C	2B 3A		4
Little Cottonwood Creek and tributaries, from confluence with Jordan River to Metropolitan Water Treatment Plant		2B 3A		4
Little Cottonwood Creek and tributaries, from Metropolitan Water Treatment Plant to headwaters	1C	2B 3A		
Bell Canyon Creek and tributaries, from lower Bell's Canyon reservoir to headwaters	1C	2B 3A		
Little Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
Big Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
South Fork of Dry Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
All permanent streams on east slope of Oquirrh Mountains (Coon, Barney's, Bingham, Butterfield, and Rose Creeks)		2B	3D	4
Kersey Creek from confluence of C-7				

Utah Lake to headwaters	2B	3B	4
Mill Race from Interstate Highway 15 to the Provo City wastewater treatment plant discharge	2B	3B	4
Spring Creek and tributaries from Utah Lake (Provo Bay) to 50 feet upstream from the east boundary of the Industrial Parkway Road Right-of-way	2B	3B	4
Tributary to Spring Creek (Utah County) which receives the Springville City WWTP effluent from confluence with Spring Creek to headwaters	2B		3D 4
Spring Creek and tributaries from 50 feet upstream from the east boundary of the Industrial Parkway Road right-of-way to the headwaters	2B	3A	4
Ironton Canal from Utah Lake (Provo Bay) to the east boundary of the Denver and Rio Grande Western Railroad right-of-way	2B	3C	4
Ironton Canal from the east boundary of the Denver and Rio Grande Western Railroad right-of-way to the point of diversion from Spring Creek	2B	3A	4
Hobble Creek and tributaries, from Utah Lake to headwaters	2B	3A	4
Dry Creek and tributaries from Utah Lake (Provo Bay) to Interstate Highway 15	2B	3C	4
Dry Creek and tributaries from Interstate Highway 15 to headwaters	2B	3A	4
Benjamin Slough and tributaries (except Beer Creek) from Utah Lake to headwaters	2B	3B	4
Beer Creek (Utah County) from 4850 West (in NE1/4NE1/4 sec. 36, T.8 S., R.1 E.) to headwaters	2B	3C	4

Chalk Creek and tributaries, Millard County	2B 3A	4
Meadow Creek and tributaries, Millard County	2B 3A	4
Corn Creek and tributaries, Millard County	2B 3A	4
Tributaries to Sevier River from Gunnison Bend Reservoir to Annabella Diversion from U.S. National Forest boundary to headwaters	2B 3A	4
Sevier River and tributaries from Gunnison Bend Reservoir to Annabella Diversion except the following tributaries:	2B 3B	4
Oak Creek and tributaries, Millard County	2B 3A	4
Round Valley Creek and tributaries, Millard County	2B 3A	4
Chicken Creek and tributaries, Juab County	2B 3A	4
San Pitch River and tributaries, from confluence with Sevier River to Highway U-132 crossing except the following tributaries:	2B 3C 3D 4	
Twelve Mile Creek and tributaries, from U.S. Forest Service boundary to headwaters	2B 3A	4
Six Mile Creek and tributaries, Sanpete County	2B 3A	4
Manti Creek and tributaries, from U.S. Forest Service boundary to headwaters	2B 3A	4
Ephraim Creek and tributaries, from U.S. Forest Service to headwaters	2B 3A	4
Oak Creek and tributaries, from U.S. Forest Service boundary near Spring City to		

Elder County	2B 3A	4
Muddy Creek and tributaries, Box Elder County	2B 3C	4
Dove Creek and tributaries, Box Elder County	2B 3A	4
Pine Creek and tributaries, Box Elder County	2B 3A	4
Rock Creek and tributaries, Box Elder County	2B 3A	4
Fisher Creek and tributaries, Box Elder County	2B 3A	4
Dunn Creek and tributaries, Box Elder County	2B 3A	4
Donner Creek and tributaries, from irrigation diversion to Utah-Nevada state line	2B 3A	4
Bettridge Creek and tributaries, from irrigation diversion to Utah-Nevada state line	2B 3A	4
Indian Creek and tributaries, Box Elder County	2B 3A	4
Tenmile Creek and tributaries, Box Elder County	2B 3A	4
Curlew (Deep) Creek, Box Elder County	2B 3A	4
Blue Creek and tributaries, from Great Salt Lake to Blue Creek Reservoir	2B 3D	4
Blue Creek and tributaries, from Blue Creek Reservoir to headwaters	2B 3B	4
All perennial streams on the east slope of the Pilot Mountain Range	1C 2B 3A	4
North Willow Creek and tributaries, Tooele County	2B 3A	4
South Willow Creek and tributaries, Tooele County	2B 3A	4

Counties	2B 3A	4
Cold Spring, Juab County	2B	3C 3D
Cane Spring, Juab County	2B	3C 3D
Lake Creek, from Garrison (Pruess) Reservoir to Nevada state line	2B 3A	4
Snake Creek and tributaries, Millard County	2B 3B	4
Salt Marsh Spring Complex, Millard County	2B 3A	
Twin Springs, Millard County	2B 3B	
Tule Spring, Millard County	2B	3C 3D
Coyote Spring Complex, Millard County	2B	3C 3D
Hamblin Valley Wash and tributaries, from Nevada state line to headwaters (Beaver and Iron Counties)	2B	3D 4
Indian Creek and tributaries, Beaver County, from Indian Creek Reservoir to headwaters	2B 3A	4
Shoal Creek and tributaries, Iron County	2B 3A	4

b. Farmington Bay Drainage

TABLE

Corbett Creek and tributaries, from Highway to headwaters	2B 3A	4
Kays Creek and tributaries, from Farmington Bay to U.S. National Forest boundary	2B 3B	4
North Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	2B 3A	4
Middle Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	1C 2B 3A	4

Barnard Creek and tributaries, from Highway US-89 to headwaters		2B 3A	4
Parrish Creek and tributaries, from Davis Aqueduct to headwaters		2B 3A	4
Deuel Creek and tributaries, from Davis Aqueduct to headwaters		2B 3A	4
Stone Creek and tributaries, from Farmington Bay Waterfowl Management Area to U.S. National Forest boundary		2B 3A	4
Stone Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Barton Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A	4
Mill Creek (Davis County) and tributaries, from confluence with State Canal to U.S. National Forest boundary		2B 3B	4
Mill Creek (Davis County) and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
North Canyon Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A	4
Hobart Slough		2B 3C	4
Hooper Slough		2B 3C	4
Willard Slough		2B 3C	4
Willard Creek to Headwaters	1C	2B 3A	4
Chicken Creek to Headwaters	1C	2B 3A	4
Cold Water Creek to Headwaters	1C	2B 3A	4
One House Creek to Headwaters	1C	2B 3A	4
Garner Creek to Headwaters	1C	2B 3A	4

### 13.8 Snake River Basin

#### a. Raft River Drainage (Box Elder County)



Farmington Bay Waterfowl Management Area, Davis and Salt Lake Counties	3C 3D
Fish Springs National Wildlife Refuge, Juab County	3C 3D
Harold Crane Waterfowl Management Area, Box Elder County	3C 3D
Howard Slough Waterfowl Management Area, Weber County	3C 3D
Locomotive Springs Waterfowl Management Area, Box Elder County	3B 3D
Ogden Bay Waterfowl Management Area, Weber County	3C 3D
Ouray National Wildlife Refuge, Uintah County	3B 3D
Powell Slough Waterfowl Management Area, Utah County	3C 3D
Public Shooting Grounds Waterfowl Management Area, Box Elder County	3C 3D
Salt Creek Waterfowl Management Area, Box Elder County	3C 3D
Stewart Lake Waterfowl Management Area, Uintah County	3B 3D
Timpie Springs Waterfowl Management Area, Tooele County	3B 3D

13.12 Lakes and Reservoirs (20 Acres or Larger). All lakes not listed in 13.12 are assigned by default to the classification of the stream with which they are associated.

a. Beaver County

TABLE

Anderson Meadow Reservoir	2B 3A	4
Manderfield Reservoir	2B 3A	4
LaBaron Reservoir	2B 3A	4

Flaming Gorge Reservoir (Utah portion)	1C 2A 2B 3A	4
Long Park Reservoir	2B 3A	4
Sheep Creek Reservoir	2B 3A	4
Spirit Lake	2B 3A	4
Upper Potter Lake	2B 3A	4

f. Davis County

	TABLE	
Farmington Ponds	2B 3A	4
Kaysville Highway Ponds	2B 3A	4
Holmes Creek Reservoir	2B 3B	4

g. Duchesne County

	TABLE	
Allred Lake	2B 3A	4
Atwine Lake	2B 3A	4
Atwood Lake	2B 3A	4
Betsy Lake	2B 3A	4
Big Sandwash Reservoir	1C 2B 3A	4
Bluebell Lake	2B 3A	4
Brown Duck Reservoir	2B 3A	4
Butterfly Lake	2B 3A	4
Cedarview Reservoir	2B 3A	4
Chain Lake #1	2B 3A	4
Chepeta Lake	2B 3A	4
Clements Reservoir	2B 3A	4
Cleveland Lake	2B 3A	4
Cliff Lake	2B 3A	4
Continent Lake	2B 3A	4

Palisade Lake	2B 3A	4
Pine Island Lake	2B 3A	4
Pinto Lake	2B 3A	4
Pole Creek Lake	2B 3A	4
Potter's Lake	2B 3A	4
Powell Lake	2B 3A	4
Pyramid Lake	2A 3A	4
Queant Lake	2B 3A	4
Rainbow Lake	2B 3A	4
Red Creek Reservoir	2B 3A	4
Rudolph Lake	2B 3A	4
Scout Lake	2A 2B 3A	4
Spider Lake	2B 3A	4
Spirit Lake	2B 3A	4
Starvation Reservoir	1C 2A 2B 3A	4
Superior Lake	2B 3A	4
Swasey Hole Reservoir	2B 3A	4
Taylor Lake	2B 3A	4
Thompson Lake	2B 3A	4
Timothy Reservoir #1	2B 3A	4
Timothy Reservoir #6	2B 3A	4
Timothy Reservoir #7	2B 3A	4
Twin Pots Reservoir	1C 2B 3A	4
Upper Stillwater Reservoir	1C 2B 3A	4
X - 24 Lake	2B 3A	4

h. Emery County

TABLE

j. Iron County

TABLE

Newcastle Reservoir	2B 3A	4
Red Creek Reservoir	2B 3A	4
Yankee Meadow Reservoir	2B 3A	4

k. Juab County

TABLE

Chicken Creek Reservoir	2B	3C 3D	4
Mona Reservoir	2B	3B	4
Sevier Bridge (Yuba) Reservoir	2A 2B	3B	4

l. Kane County

TABLE

Navajo Lake	2B 3A	4
-------------	-------	---

m. Millard County

TABLE

DMAD Reservoir	2B	3B	4
Fools Creek Reservoir	2B	3C 3D	4
Garrison Reservoir (Pruess Lake)	2B	3B	4
Gunnison Bend Reservoir	2B	3B	4

n. Morgan County

TABLE

East Canyon Reservoir	1C 2A 2B 3A	4
Lost Creek Reservoir	1C 2B 3A	4

o. Piute County

TABLE

Barney Reservoir	2B 3A	4
Lower Boxcreek Reservoir	2B 3A	4

Duck Fork Reservoir		2B 3A	4
Fairview Lakes	1C	2B 3A	4
Ferron Reservoir		2B 3A	4
Lower Gooseberry Reservoir	1C	2B 3A	4
Gunnison Reservoir		2B 3C	4
Island Lake		2B 3A	4
Miller Flat Reservoir		2B 3A	4
Ninemile Reservoir		2B 3A	4
Palisade Reservoir	2A	2B 3A	4
Rolfson Reservoir		2B 3C	4
Twin Lakes		2B 3A	4
Willow Lake		2B 3A	4

t. Sevier County

TABLE

Annabella Reservoir		2B 3A	4
Big Lake		2B 3A	4
Farnsworth Lake		2B 3A	4
Fish Lake		2B 3A	4
Forsythe Reservoir		2B 3A	4
Johnson Valley Reservoir		2B 3A	4
Koosharem Reservoir		2B 3A	4
Lost Creek Reservoir		2B 3A	4
Redmond Lake		2B 3B	4
Rex Reservoir		2B 3A	4
Salina Reservoir		2B 3A	4
Sheep Valley Reservoir		2B 3A	4

u. Summit County

Lower Red Castle Lake	2B 3A	4
Lyman Lake	2A 2B 3A	4
Marsh Lake	2B 3A	4
Marshall Lake	2B 3A	4
McPheters Lake	2B 3A	4
Meadow Reservoir	2B 3A	4
Meeks Cabin Reservoir	2B 3A	4
Notch Mountain Reservoir	2B 3A	4
Red Castle Lake	2B 3A	4
Rockport Reservoir	1C 2A 2B 3A	4
Ryder Lake	2B 3A	4
Sand Reservoir	2B 3A	4
Scow Lake	2B 3A	4
Smith Moorehouse Reservoir	1C 2B 3A	4
Star Lake	2B 3A	4
Stateline Reservoir	2B 3A	4
Tamarack Lake	2B 3A	4
Trial Lake	1C 2B 3A	4
Upper Lyman Lake	2B 3A	4
Upper Red Castle	2B 3A	4
Wall Lake Reservoir	2B 3A	4
Washington Reservoir	2B 3A	4
Whitney Reservoir	2B 3A	4

v. Tooele County

#### TABLE

Blue Lake	2B 3B	4
Clear Lake	2B 3B	4

x. Utah County

TABLE

Salem Pond	2A	3A	4
Silver Flat Lake Reservoir	2B	3A	4
Tibble Fork Reservoir	2B	3A	4
Utah Lake	2B	3B	3D 4

y. Wasatch County

TABLE

Currant Creek Reservoir	1C	2B 3A	4
Deer Creek Reservoir	1C 2A	2B 3A	4
Jordanelle Reservoir	1C 2A	3A	4
Mill Hollow Reservoir		2B 3A	4
Strawberry Reservoir	1C	2B 3A	4

z. Washington County

TABLE

Baker Dam Reservoir		2B 3A	4
Gunlock Reservoir	1C 2A	2B 3B	4
Ivins Reservoir		2B 3B	4
Kolob Reservoir		2B 3A	4
Lower Enterprise Reservoir		2B 3A	4
Quail Creek Reservoir	1C 2A	2B 3B	4
Upper Enterprise Reservoir		2B 3A	4

aa. Wayne County

TABLE

Blind Lake		2B 3A	4
Cook Lake		2B 3A	4
Donkey Reservoir		2B 3A	4

Chromium	0.05	0.10
Copper		0.2
Lead	0.05	0.1
Mercury	0.002	
Selenium	0.01	0.05
Silver	0.05	

INORGANICS  
(MAXIMUM MG/L)

Boron		0.75
Fluoride (3)	1.4-2.4	
Nitrates as N	10	
Total Dissolved Solids (4)		1200

RADIOLOGICAL  
(MAXIMUM pCi/L)

Gross Alpha	15	15
Radium 226, 228 (Combined)	5	
Strontium 90	8	
Tritium	20000	

ORGANICS  
(MAXIMUM UG/L)

Chlorophenoxy Herbicides	
2,4-D	100
2,4,5-TP	10
Endrin	0.2
Hexachlorocyclohexane (Lindane)	4
Methoxychlor	100
Toxaphene	5

POLLUTION  
INDICATORS (5)

Gross Beta (pCi/L)	50	50
BOD (MG/L)	5	5
Nitrate as N (MG/L)	4	4
Total Phosphorus as P (MG/L) (6)	0.05	0.05
Total Suspended Solids (MG/L)	90	90

FOOTNOTES:

(1) These limits are not applicable to lower water levels in deep impoundments.

(2) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no



Arsenic (Trivalent)				
4 Day Average	190	190	190	190
1 Hour Average	360	360	360	360
Cadmium (5)				
4 Day Average	1.1	1.1	1.1	1.1
1 Hour Average	3.9	3.9	3.9	3.9
Chromium (11) (Hexavalent)				
4 Day Average	11	11	11	11
1 Hour Average	16	16	16	16
Chromium (Trivalent) (5)				
4 Day Average	210	210	210	210
1 Hour Average	1700	1700	1700	1700
Copper (5)				
4 Day Average	12	12	12	
1 Hour Average	18	18	18	18
Cyanide (Free)				
4 Day Average	5.2	5.2	5.2	
1 Hour Average	22	22	22	22
Iron (Maximum)				
4 Day Average	1000	1000	1000	1000
Lead (5)				
4 Day Average	3.2	3.2	3.2	3.2
1 Hour Average	82	82	82	82
Mercury				
4 Day Average	0.012	0.012	0.012	0.012
1 Hour Average (11)	2.4	2.4	2.4	2.4
Nickel (5)				
4 Day Average	160	160	160	160
1 Hour Average	1400	1400	1400	1400
Selenium				
4 Day Average	5.0	5.0	5.0	5.0
1 Hour Average	20	20	20	20
Silver				
1 Hour Average (5)	4.1	4.1	4.1	4.1
Zinc (5)				
4 Day Average	110	110	110	110
1 Hour Average	120	120	120	120
INORGANICS (MG/L) (3)				
Total Ammonia as N (6)				
4 Day Average	(6a)	(6a)		
1 Hour Average	(6b)	(6b)	(6b)	(6b)
Chlorine (Total Residual)				
4 Day Average	0.011	0.011	0.011	
1 Hour Average	0.019	0.019	0.019	(7)
Hydrogen Sulfide (Undissociated, Max. UG/L)				
4 Day Average	2.0	2.0	2.0	2.0
Phenol (Maximum)				
4 Day Average	0.01	0.01	0.01	0.01

Total Suspended Solids (MG/L) (8)	35	90	90
-----------------------------------	----	----	----

FOOTNOTES:

- (1) Not to exceed 110% of saturation.
- (2) These limits are not applicable to lower water levels in deep impoundments. First number in column is for when early life stages are present, second number is for when all other life stages present.
- (3) Where criteria are listed as 4-day average and 1-hour average concentrations, these concentrations should not be exceeded more often than once every three years on the average.
- (4) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by atomic absorption spectrophotometry or inductively coupled plasma (ICP).
- (5) Hardness dependent criteria. 100 mg/l used. Conversion factors for ratio of total recoverable metals to dissolved metals must also be applied. See Table 2.14.3 for complete equations for hardness and conversion factors.
- (6) Un-ionized ammonia toxicity is dependent upon the temperature and pH of the waterbody. For detailed explanation refer to Federal Register, vol. 50, 30784, July 29, 1985.

The following equations are used to calculate criteria concentrations:

(6a) The 4-Day average (chronic) concentration of un-ionized ammonia in mg/l as N is  $(0.80 / FT / FPH / \text{RATIO}) * 0.822$ , where  
 $FT = 10^{0.03(20 - \text{TCAP})}$ ; T is greater than or equal to TCAP and less than or equal to 30

$= 10^{0.03(20 - T)}$ ; T is greater than or equal to 0 and less than or equal to TCAP.

$FPH = 1$ ; pH is greater than or equal to 8.0 and less than or equal to 9.0.

$= (1 + 10^{7.4 - \text{pH}}) / 1.25$  pH is greater than or equal to 6.5 and less than 8.0

T = degrees C, and

TCAP = 15 C for salmonids or other sensitive coldwater species, or

= 20 C for salmonids and other sensitive coldwater species absent.

RATIO = 13.5; pH is greater than or equal to 7.7 and less than or equal to 9.0.

$= 20(10^{7.7 - \text{pH}}) / 1 + 10^{7.4 - \text{pH}}$ ; pH is greater than or equal to 6.5 and less than or equal to 7.7.

(6b) The 1-Hour average (acute) concentration of un-ionized ammonia in mg/l as N is  $(0.52 / FT / FPH / 2) * 0.822$

Where:

$FT = 10^{0.03(20 - \text{TCAP})}$ ; T is greater or equal to TCAP and less than or equal to 30.

$= 10^{0.03(20 - T)}$ ; T is greater than or equal to 0 and less than or equal to TACP.

$FPH = 1$ ; pH is greater than or equal to 8.0 and less than or equal to 9.0.

$= (1 + 10^{7.4 - \text{pH}}) / 1.25$  pH is greater than or equal to 6.5 or

TEMPERATURE (C)

pH	0.00	5.00	10.00	15.00	20.00	25.00	30.00
6.50	2.49	2.33	2.21	2.12	1.46	1.02	0.72
7.00	2.49	2.33	2.21	2.13	1.47	1.03	0.73
7.50	2.50	2.34	2.22	2.14	1.48	1.04	0.74
8.00	1.49	1.40	1.33	1.29	0.90	0.64	0.46
8.50	0.48	0.45	0.44	0.43	0.31	0.23	0.17
9.00	0.16	0.16	0.16	0.16	0.12	0.10	0.08

TABLE  
1-HOUR AVERAGE (ACUTE) CONCENTRATION OF  
TOTAL AMMONIA AS N (MG/L)  
FOR CLASS 3B, 3C, 3D WATERS  
TEMPERATURE (C)

pH	0.00	5.00	10.00	15.00	20.00	25.00	30.00
6.50	28.7	26.8	25.4	24.4	23.8	23.5	16.6
7.00	23.1	21.6	20.5	19.7	19.2	19.0	13.5
7.50	14.3	13.4	12.7	12.3	12.0	11.9	8.47
8.00	6.55	6.14	5.86	5.68	5.59	5.61	4.05
8.50	2.11	1.99	1.93	1.90	1.92	1.98	1.49
9.00	0.70	0.68	0.68	0.70	0.75	0.83	0.68

TABLE  
4-DAY AVERAGE (CHRONIC) CONCENTRATION OF  
TOTAL AMMONIA AS N (MG/L)  
FOR CLASS 3B WATERS  
TEMPERATURE (C)

pH	0.00	5.00	10.00	15.00	20.00	25.00	30.00
6.50	2.49	2.33	2.21	2.12	2.07	1.44	1.02
7.00	2.49	2.33	2.21	2.13	2.07	1.45	1.03
7.50	2.50	2.34	2.22	2.14	2.09	1.47	1.04
8.00	1.49	1.14	1.33	1.29	1.27	0.90	0.65
8.50	0.48	0.45	0.44	0.43	0.44	0.32	0.24
9.00	0.16	0.16	0.16	0.16	0.17	0.13	0.11

TABLE 2.14.3a  
EQUATIONS FOR PARAMETERS WITH  
HARDNESS (1) DEPENDENCE, INCLUDING CONVERSION FACTORS  
FOR TOTAL RECOVERABLE TO DISSOLVED METALS

Parameter 4-Day Average (Chronic)  
Concentration (UG/L)

CADMIUM  $CF_x e^{(0.7852(\ln(\text{hardness})) - 3.490)}$   
hardness) (0.041838)

CF = 1.101672 - (ln

TABLE 2.14.5  
SITE SPECIFIC CRITERIA FOR TOTAL AMMONIA AND  
DISSOLVED OXYGEN FOR JORDAN RIVER AND SURPLUS CANAL SEGMENTS  
(SEE SECTION 2.13)

DISSOLVED OXYGEN:

May-July

7-day average	5.5 mg/l
30-day average	5.5 mg/l
Instantaneous minimum	4.5 mg/l

August-April

30-day average	5.5 mg/l
Instantaneous minimum	4.0 mg/l

Total Ammonia as N:

(1) The maximum concentration of unionized ammonia should not exceed the numerical value given by the following:

$$0.15 \times (f(T) / f(pH)) \times 2.989$$

where:

$$f(T) = 1; T \text{ greater than or equal to } 10C$$

$$= (1 + 10^{(9.73-pH)}) / (1 + 10^{(pK_t - pH)}); T \text{ less than } 10C$$

$$f(pH) = 1 + 10^{(1.03(7.32-pH))}$$

$$pK_t = 0.090 + (2730 / (T + 273.2))$$

(2) The average concentration of unionized ammonia over any 30 consecutive days should be less than the value given by the following:

$$0.031 \times (f(T) / f(pH)) \times 2.10$$

where:

$$f(pH) = 1; pH \text{ greater than or equal to } 7.7$$

$$= 10^{(0.74(7.7-pH))}; pH \text{ less than } 7.7$$

$$f(T) = 1; T \text{ greater than or equal to } 10C$$

$$= (1 + 10^{(9.73-pH)}) / (1 + 10^{(pK_t - pH)}); T \text{ less than } 10C$$

(3) Total Ammonia in mg/l as N is Un-ionized Ammonia in mg/l as N  $\times (1 + 10^{pK_a - pH})$ , where:

$$pK_a = 0.09018 + 2729.92 / T$$

$$T = \text{Temperature (C)} + 273.2$$

TABLE  
MAXIMUM CONCENTRATION (ACUTE)  
TOTAL AMMONIA AS N (MG/L)  
TEMPERATURE (C)

pH	0.00	5.00	10.00	15.00	20.00	25.00	30.00
6.50	95.3	95.3	95.3	64.9	44.7	31.2	22.1
6.75	88.1	88.1	88.1	60.0	41.4	28.9	20.4
7.00	76.9	76.9	76.9	52.4	35.1	25.3	17.9
7.25	62.3	62.3	62.3	42.4	29.3	20.5	14.6
7.50	46.3	46.3	46.3	31.6	21.9	15.4	10.9
7.75	31.8	31.8	31.8	21.7	15.1	10.6	7.60
8.00	20.5	20.5	20.4	14.0	9.79	6.94	5.01
8.25	12.6	12.6	12.6	8.70	6.12	4.40	3.22

17	Bis(2-chloroethyl) ether	111-44-4	0.031	1.4
18	2-Chloroethyl vinyl ether	110-75-8	-	-
19	2-Chloronaphthalene	91-58-7	1700	4300
20	2,4,6-Trichlorophenol	88-06-2	2.1	6.5
21	p-Chloro-m-cresol	59-50-7	-	-
22	Chloroform (HM)	67-66-3	5.7	470
23	2-Chlorophenol	95-57-8	120	400
24	1,2-Dichlorobenzene	95-50-1	2700	17000
25	1,3-Dichlorobenzene	541-73-1	400	2600
26	1,4-Dichlorobenzene	106-46-7	400	2600
27	3,3'-Dichlorobenzidine	91-94-1	0.04	0.077
28	1,1-Dichloroethylene	75-35-4	0.057	3.2
29	1,2-trans- Dichloroethylenel	56-60-5	700	-
30	2,4-Dichlorophenol	120-83-2	93	790
31	1,2-Dichloropropane	78-87-5	0.52	39
32	1,3-Dichloropropylene	542-75-6	10	1700
33	2,4-Dimethylphenol	105-67-9	540	2300
34	2,4-Dinitrotoluene	121-14-2	0.11	9.1
35	2,6-Dinitrotoluene	606-20-2	-	-
36	1,2-Diphenylhydrazine	122-66-7	0.040	0.54
37	Ethylbenzene	100-41-4	3100	29000
38	Fluoranthene	206-44-0	300	370
39	4-Chlorophenyl phenyl ether	7005-72-3	-	-
40	4-Bromophenyl phenyl ether	101-55-3	-	-
41	Bis(2-chloroisopropyl) ether	39638-32-9	1400	170000
42	Bis(2-chloroethoxy) methane	111-91-1	-	-
43	Methylene chloride (HM)	75-09-2	4.7	1600
44	Methyl chloride (HM)	74-87-3	-	-
45	Methyl bromide (HM)	74-83-9	-	-
46	Bromoform (HM)	75-25-2	4.3	360
47	Dichlorobromomethane (HM)	75-27-4	0.27	22
48	Chlorodibromomethane (HM)	124-48-1	0.41	34
49	Hexachlorobutadiene(c)	87-68-3	0.44	50
50	Hexachlorocyclo- pentadiene	77-47-4	240	17000
51	Isophorone	78-59-1	8.4	600
52	Naphthalene	91-20-3	-	-
53	Nitrobenzene	98-95-3	17	1900
54	2-Nitrophenol	88-75-5	-	-
55	4-Nitrophenol	100-02-7	-	-
56	2,4-Dinitrophenol	51-28-5	70	14000
57	4,6-Dinitro-o-cresol	534-52-1	13	765
58	N-Nitrosodimethylamine	62-75-9	0.00069	8.1
59	N-Nitrosodiphenylamine	86-30-6	5.0	16
60	N-Nitrosodi-n-			

	hexane (gamma-BHC)	58-89-9	0.019	0.063
102	delta-hexachlorocyclo-			
	hexane (delta-BHC)	319-86-8	-	-
	PCB's			
103	PCB 1242			
	(Arochlor 1242)	1336-36-3	0.000044	0.000045
104	PCB-1254			
	(Arochlor 1254)	1336-36-3	0.000044	0.000045
105	PCB-1221			
	(Arochlor 1221)	1336-36-3	0.000044	0.000045
106	PCB-1232			
	(Arochlor 1232)	1336-36-3	0.000044	0.000045
107	PCB-1248			
	(Arochlor 1248)	1336-36-3	0.000044	0.000045
108	PCB-1260			
	(Arochlor 1260)	1336-36-3	0.000044	0.000045
109	PCB-1016			
	(Arochlor 1016)	1336-36-3	0.000044	0.000045
	Pesticide			
110	Toxaphene	8001-35-2	0.00073	0.00075
	Metals			
111	Antimony	7440-36-0	14	4300
112	Arsenic	7440-38-2	50	-
113	Asbestos	1332-21-4	7000000 f/l	-
114	Beryllium	7440-41-7	-	-
115	Cadmium	7440-43-9	-	-
116	Chromium (III)	440-47-3	-	-
	Chromium (VI)	-	-	-
117	Copper	7440-50-8	1300	-
118	Cyanide	57-12-5	700	220000
119	Lead	7439-92-1	-	-
120	Mercury	7439-97-6	0.14	0.15
121	Nickel	7440-02-0	610	4600
122	Selenium	7782-49-2	-	-
123	Silver	7440-22-4	-	-
124	Thallium	7440-28-0	1.7	6.3
125	Zinc	7440-66-6	-	-
	Dioxin			
126	Dioxin (2,3,7,8-TCDD)	1746-01-6	0.000000013	0.000000014

**KEY: water pollution, water quality standards**

**Notice of Continuation December 12, 1997**

**March 17, 2000**

**19-5**